

Cleavage of the C–Si bond in Trifluoro(phenyl)silane with Aliphatic Alcohols

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Abstract—Trifluoro(phenyl)silane reacts with aliphatic alcohols under reflux. The reaction involves not only Si–F bond cleavage to form ethoxyfluoro(phenyl)silanes, but also C–Si bond cleavage to form benzene and alkoxyfluoro- and tetraalkoxysilanes. The formation of the latter products was proved by ^{19}F and ^{29}Si NMR spectroscopy and also by model disproportionation reactions of trifluoro(phenyl)silane with trimethoxy-(phenyl)-, tetramethoxy-, or tetraethoxysilanes.